Magpie Creek Flood Control Project

Section 404 (b)(1) Water Quality Evaluation

I. Project Description

A. Location

The Magpie Creek watershed is located in Sacramento County in the northern part of the City of Sacramento. Bounded by Interstate 80 to the east and south, Steelhead Creek (formerly the Natomas East Main Drainage Canal) to the west, and Dry Creek to the north, the watershed, a sub basin of Dry Creek and a minor sub basin of the American River basin, drains an area of about 15 square miles. Historically, Magpie Creek flowed southwest from Raley Boulevard to a location near the intersection of Interstate 80 and Steelhead Creek. In the mid 1950's, the Corps of Engineers constructed the Magpie Creek Diversion Channel (MCDC) that diverted the flow of Magpie Creek and conveys it to Robla Creek and eventually Steelhead Creek.

B. General Description

The proposed action has five components: raising the existing levee along the MCDC; constructing an earthen levee along Raley Boulevard; preserving and protecting the existing floodplain; constructing a drainage and culvert at Robla Creek; and constructing a new access road from Vinci Avenue to Dry Creek Road. For a complete description of the proposed action, please refer to section 2.2 of the Environmental Assessment.

The waterways and potential jurisdictional wetland areas in the project area were measured and mapped during field surveys conducted by Environmental Science Associates in 1993 and by the USFWS in January 2000. It was determined that all major watercourses in the project area could be subject to Corps jurisdiction under Section 404 of the Clean Water Act. Magpie Creek, Don Julio Creek, historic Magpie creek, and the MCDC qualify as Waters of the United States under jurisdiction of the Corps, and seasonal wetlands in the floodplain area could also be under Corps jurisdiction. No construction activities would occur within the Ordinary High Water Mark of these jurisdictional watercourses or in any of the seasonal wetlands. For the levee-raising component, the construction area would be limited to the top of levee, landside slope, and a maximum of 5 feet on the waterside slope, measured from the top of the levee. For the drainage and culvert component, all work would be a minimum of 5 feet from the top of the bank of the existing Robla Creek channel to avoid disturbing Robla Creek.

C. Authority and Purpose

This project is conducted under Section 205 of the Flood Control Act of 1948 (PL80-858), as amended, for flood control.

Increased urbanization over the past 50 years has resulted in frequent flooding in the Magpie Creek area. As recent as February 1998, floodwaters bypassed or outflanked the diversion levee at Raley Boulevard, causing flooding to roads and residential and commercial structures. Generally, flood damages in the study area occur in one or more of the following ways: the combined flows of Magpie and Don Julio Creeks overtop their banks, floodwaters overtop Raley Boulevard, and floodwaters exceed the MCDC channel capacity. The purpose of this action is to provide adequate flood protection to existing homes and businesses along historic Magpie Creek.

D. General Description of Dredged or Fill Material

There are three possible sources for the fill material for levee construction. Borrow material may be obtained from the trench constructed at the toe of the raised MCDC levee, in addition to the material excavated from the bike trail culvert construction and channel excavation. If these sources are unsuitable, the borrow site for the project is located about 300 feet west of Dry Creek Road between Ascot Avenue and the MCDC as shown in Figure 2. SAFCA has placed material excavated from a previous project in a stockpile.

E. Description of the Proposed Discharge Site(s)

The existing levee along the MCDC will be raised. There will be a new levee constructed adjacent to Raley Boulevard.

F. Description of Disposal Method (hydraulic, drag line, etc.)

The levee fill material will be placed using construction equipment such as a loader and a dozer.

II. Factual Determinations

A. Physical Substrate Determinations

Not applicable.

Water Circulation. Fluctuation and Salinity Determinations

Not applicable.

Suspended Particulate/Turbidity Determinations

Not applicable.

Contaminant Determinations

Not applicable.

E. Aquatic Ecosystem and Organism Determinations

(1) Effects on Plankton

Not applicable.

(2) Effects on Benthos

Not applicable.

(3) Effects on Nekton

Not applicable.

(4) Effects on Aquatic Food Web

Not applicable.

(5) Effects on Special Aquatic Sites

(a) Sanctuaries and Refuges

Not applicable.

(b) Wetlands

Indirect effects to two small wetlands could result from elimination of outflanking storm flows during 2-year flood events. Two wetlands, totaling approximately 0.25 acre, are present to the west of the Kelly Moore Paint building. It is unknown whether these wetlands are solely reliant upon the outflanking events.

(b) Mud Flats

Not applicable.

(c) Vegetated Shallows

Not applicable.

(d) Coral Reefs

Not applicable.

(e) Riffle and Pool Complexes

Not applicable.

(6) Threatened and Endangered Species

Vernal pool fairy shrimp (*Branchinecta lunchi*) and vernal pool tadpole shrimp (*Lepidurus packardii*) are federally listed species known to occur in the project area, and California linderiella (*Linderiella occidentalis*) is a California species of special concern

known to occur in the project area. Vernal pool fairy shrimp were found in several pools between Magpie and Don Julio creeks (east of Raley Boulevard), vernal pool tadpole shrimp were found in pools north of Magpie Creek (west of Raley Boulevard), and linderiella were found in various pools throughout the project area during the 1998 wet season survey conducted by EIP Associates.

California tiger salamander (*Ambystoma californiense*) and western spadefoot (*Scaphiopus hammondii*) require vernal pools or other suitable wetlands for breeding. California tiger salamander is a federal candidate for listing as Threatened or Endangered, and both species are California Species of Special Concern. Seasonal wetlands in the project area may provide suitable habitat for these species but neither were detected during the vernal pool crustacean surveys.

As described above, indirect effects could occur to two wetlands, which could, under existing conditions, provide suitable vernal pool crustacean habitat. It is unknown whether these wetlands are solely reliant upon outflanking events. Therefore, the wetlands and vernal pool plants and crustaceans, if present, could be adversely affected by elimination of these flows.

(7) Other Wildlife

Not applicable.

(8) Actions to Minimize Impacts

The Corps is consulting with the USFWS under Section 7 of the Endangered Species Act (ESA) for potential impacts to vernal pool crustaceans. The environmental assessment will be submitted as the biological assessment, and the USFWS will then issue a biological opinion. The project is expected to qualify under the Programmatic Formal ESA Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans.

In accordance with mitigation ratios for indirect impacts set forth in the USFWS's Mitigation, Monitoring, and Management Guidelines for Federally Listed Vernal Pool Crustaceans, the Corps shall acquire 0.5 mitigation credits from a USFWS-approved mitigation bank for preservation of vernal pool habitat. A qualified wetland biologist shall develop a conceptual wetlands mitigation plan. This shall include an appropriate ratio of wetland acres affected to wetland acres created, in order to ensure no net loss of wetlands. The mitigation plan shall quantify the total jurisdictional acreage affected, describe creation/replacement ratios, annual

success criteria, potential mitigation sites, and monitoring and maintenance requirements.

F. Proposed Disposal Site Determinations

The fill material used to raise the levee and construct the levee will have no adverse effects on the aquatic environment in the project area because all work will be done on high ground.

G. Determination of Cumulative Effects on the Aquatic Ecosystem

The proposed action would not result in any cumulative effects on the aquatic ecosystem.

H. Determination of Secondary Effects on the Aquatic Ecosystem

The proposed action would not result in any secondary effects on the aquatic ecosystem.

III. Findings of Compliance or Non-Compliance With the Restrictions on Discharge

A. Adaptation of the Section 404(b)(l) Guidelines to this Evaluation

No significant adaptations of the guidelines were made relative to this evaluation.

B. Evaluation of Availability of Practicable Alternatives to the Proposed Discharge Site Which Would Have Less Adverse Impact on the Aquatic Ecosystem

There are no practicable alternatives available that would have less impact on the aquatic environment.

C. Compliance with Applicable State Water Quality Standards

The work will be accomplished to assure compliance with all applicable water quality standards.

D. Compliance with Applicable Toxic Effluent Standard or Prohibition Under Section 307 Of the Clean Water Act

Not Applicable.

Compliance with Endangered Species Act of 1973

As previously mentioned, the Corps is consulting with the USFWS under Section 7 of the ESA for potential impacts to vernal pool crustaceans. The environmental assessment will be submitted as the biological assessment, and the USFWS will then issue a biological opinion. The project is expected to qualify under the Programmatic Formal ESA Consultation on

Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans. For more information, please refer to section 3.5 of the environmental assessment.

F. Compliance with Specified Protection Measures for Marine Sanctuaries Designated by the Marine Protection, Research, and Sanctuaries Act of 1972

Not applicable.

Evaluation of Extent of Degradation of the Waters of the United States

Not applicable.

G. Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem

In accordance with mitigation ratios for indirect impacts set forth in the USFWS's Mitigation, Monitoring, and Management Guidelines for Federally Listed Vernal Pool Crustaceans, the Corps shall acquire 0.5 mitigation credits from a USFWS-approved mitigation bank for preservation of vernal pool habitat.

H. Compliance with the guidelines.

On the Basis of the Guidelines. the proposed action is specified as complying with the requirements of these guidelines, with the inclusion of the appropriate and practical conditions to minimize adverse effects on the aquatic ecosystem.